

Appln. No.: 10/502,473
Amendment Dated March 23, 2007
Reply to Office Action of December 4, 2006

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DTG1-120US

Remarks/Arguments:

Claims 1-36 were pending in the application at the time of the office action. Claims 24-36 were withdrawn from consideration.

Claims 3-23 are objected to for impermissible multiple dependency, and Claims 11 and 12 are objected to for improper form. The claims have been amended accordingly. In particular, claims 11-14 have been canceled and replaced with claims 37-54 to overcome the issues of impermissible multiple dependency raised in the office action. No new matter has been added. Claims 25 and 33 are canceled herewith without prejudice to possible further prosecution, to overcome improper multiple dependency issues and to reduce the number of pending claims.

Applicants note that Box 12 of the office action, indicating that copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau, has not been checked off by the examiner. Applicants respectfully request that Box 12 be checked off in the next office action or, if the priority documents have in fact not been received, request that the examiner obtain these documents from the International Bureau.

35 U.S.C. § 112

Claims 1 and 4 are rejected as indefinite due to use of the phrase "has a degree of shrinkage in the longitudinal dimension of the tube of about 0% to about 50% over the temperature range 55 to 100°C". The limitation regarding shrinkage in the transverse direction is also deemed indefinite. The claims have been amended to recite that the shrinkage of the substrate layer is measured "when heated from ambient temperature to a temperature in the range of 55 to 100°C", as supported in the application on page 29 at lines 31-33. No new matter has been added.

Claim 1 is also rejected as indefinite due to use of the phrase "separating means". Applicants point out that this term is adequately defined in the specification in the passage beginning at page 4, line 27 and ending at page 5, line 11, where the function of the separating means is described in detail. Accordingly, the rejection should be withdrawn.

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Claim 14 is rejected as indefinite due to use of the phrase "about 65-70 mole %" because it is not clear what the percentage refers to. Claim 14 has been canceled, and the new claims clarify that this percentage relates to the ethylene glycol component of the second copolyester, as supported in the specification on page 10 at lines 28-29.

35 U.S.C. § 103

Claims 1, 4-17, and 21-23 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hanaoka et al. (EP1 033 319 A1, "Hanaoka") in view of Kendig (WO 01/054886 A1, "Kendig"). The office action states that Hanaoka teaches the elements of instant claim 1 with the exception that Hanaoka does not teach a multilayer film that includes an inner heat-sealable layer. The office action relies upon Kendig to supply this feature, and asserts that it would have been obvious to add a heat-sealable layer such as taught by Kendig to the heat-shrinkable outer substrate layer of Hanaoka to improve the heat-sealability of the film.

To support this assertion, the office action states that:

"...both Hanaoka et al and Kendig teach that monolayer polyester films are exceptional for heat shrink applications but they are poor in heat-sealing (page 2, lines 22 to 24 of Hanaoka and page 1, lines 1 to 14 of Kendig)".

However, Hanaoka does not make any such statement (regarding poor heat sealing) in the cited passage. Rather, he merely notes that:

"The only disadvantage of the polyester films is that they have a poor impact resistance at the portion of sealing and cutting." [emphasis added]

Applicants traverse this rejection, and submit that is based on a misunderstanding of the teachings of the Hanaoka reference. Regarding this, it critical to understand that there is a fundamental difference between the "sealing and cutting" method employed by Hanaoka to attach two pieces of film together, and "heat sealing" methods (which Hanaoka does not use, and in fact states are inferior for his purposes) such as used by Kendig. The "sealing and cutting" method, also referred to as "fusion sealing and cutting," uses a hot nichrome wire, ultrasound, or high frequency waves to fuse together two pieces of polymer film, essentially melting/welding them together. See Hanaoka at

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[0001] and [0007]. The result is a joint such as shown in Hanaoka's Fig. 1a, where the rounded hump in the middle indicates the spot where the piece of film on the left side has been melted together with and joined to the piece on the right side. The "fusion sealing and cutting" process is typically done with a single layer film, i.e., without the need for an adhesive, because the two pieces of film are joined by melting them together to form the joint.

As is known in the art, the technique of "heat sealing" is quite different, and uses a film that includes at least a substrate layer (which is not melted) and a heat-softening "heat seal" layer. During the sealing process, the heat seal layer is warmed sufficiently to cause it to become sticky and adhere to some substrate (e.g., a container, another piece of film, a paper or metal film layer, or some other substrate). As Hanaoka notes at [0006], one prior art reference mentions that although films can be heat sealed when a thermal adhesive resin is applied to the film, such films when subjected to sealing and cutting (as required by his invention) have a low impact resistance at the portion of sealing and cutting, and thus "cannot be put into practical use" for purposes of his invention.

As to heat sealing (rather than sealing and cutting), Hanaoka teaches that this too is unsuitable for purposes of his invention. As he states at [0008]:

"In contrast [to sealing and cutting], impulse heat sealing or heat sealing is conducted intermittently and thus slow in processing speed. Further, overlapping sealed portions with a width of 5 to 20 mm are usually produced, so that the resulting packages have poor appearance and a pile of the packages is liable to lean and collapse when the articles wrapped in the packages are of light weight.

Accordingly, Hanaoka does not use heat sealing but instead uses sealing and cutting, stating at [0009] that:

"An object of the present invention is to provide a shrink-wrapped package which is prepared using a polyester film and which has a portion of sealing and cutting having an excellent impact resistance."

Thus, Hanaoka's invention requires sealing and cutting, and he teaches that the addition of a heat seal layer is inconsistent with this requirement.

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The office action asserts that "It would have been obvious ... to add an inner heat sealable layer ... to improve the heat sealability of the film, as taught by Kendig." However, as noted above, Hanaoka has no reason to improve heat sealability, since he does not use a heat seal process, and he in fact teaches that the addition of a layer designed to provide heat sealability would be detrimental to his purposes.

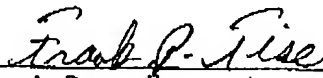
As noted in the MPEP at 2143.01 V:

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

Thus, there would be no motivation to modify Hanaoka's invention by adding the heat seal layer of Kendig. Accordingly, the rejection should be withdrawn.

Applicants respectfully request reconsideration and allowance of the claims, and invite the examiner to contact their undersigned representative, Frank Tise, if it appears that this may facilitate examination.

Respectfully submitted,


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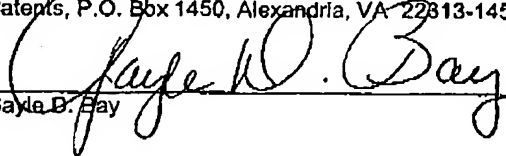
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Gayle D. Bay